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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/826,240	04/04/2001	Anil Kavipurapu	KAVIPURAPU 1	4102

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HITT GAINES, PC
AGERE SYSTEMS INC.
PO BOX 832570
RICHARDSON, TX 75083

EXAMINER

YANCHUS III, PAUL B

ART UNIT PAPER NUMBER

2116

DATE MAILED: 04/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/826,240	Applicant(s) KAVIPURAPU, ANIL	
	Examiner Paul B. Yanchus	Art Unit 2116	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 February 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 21-40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 21-40 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>2/18/05</u> | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

This non-final office action is in response amendments filed on 2/18/05.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 21-25 and 28-32 are rejected under 35 U.S.C. 102(e) as being anticipated by Atkinson, US Patent no. 6,233,691.

Atkinson was cited in previous office action dated 4/2/04.

Regarding claim 21, Atkinson discloses a power selection system for use with a reconfigurable circuit [CPU chip], comprising:

a monitoring circuit configured to determine a transition rate of at least one node located within said reconfigurable circuit [activity monitor logic monitors the column address strobe (CAS*) signal sent from the CPU and counts how many times the state of the CAS* signal has changed in a period of time, column 4, line 51 – column 5, line 37]; and

a mode selection circuit coupled to said monitoring circuit and configured to alter a power characteristic applied to at least a portion of said reconfigurable circuit based on a comparison between said transition rate and a predetermined operating range [CPU chip clock

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speed switched from a fast speed to a slower speed if the CAS* counter is less than a slow comparison value, column 6, line 53 – column 7, line 10 and column 7, lines 24-34].

Regarding claim 22, Atkinson further discloses a switching counter to determine the transition rate [CAS* counter, column 6, lines 38 – 56].

Regarding claim 23, Atkinson further discloses reducing power by reducing the clock speed of the CPU chip [column 3, lines 7-10].

Regarding claim 24, Atkinson further discloses at least one edge detection circuit configured to determine a voltage change in said at least one node and said transition rate is based on said voltage change [CAS* counter increments when the CAS* address changes, column 5, lines 25-56].

Regarding claim 25, Atkinson further discloses using an interrupt timer to employ a time period for determining a transition rate [interrupt timer, column 6, lines 45-60].

Regarding claim 28, Atkinson discloses a method of operating a reconfigurable circuit comprising:

determining a transition rate of at least one node located within said reconfigurable circuit [activity monitor logic monitors the column address strobe (CAS*) signal sent from the CPU and counts how many times the state of the CAS* signal has changed in a period of time, column 4, line 51 – column 5, line 37]; and

altering a power characteristic applied to at least a portion of said reconfigurable circuit based on a comparison between said transition rate and a predetermined operating range [CPU chip clock speed switched from a fast speed to a slower speed if the CAS* counter is less than a slow comparison value, column 6, line 53 – column 7, line 10 and column 7, lines 24-34].

Regarding claim 29, Atkinson further discloses aggregating a number of switching transitions associated with said node [CAS* counter, column 6, lines 38 – 56].

Regarding claim 30, Atkinson further discloses reducing power by reducing the clock speed of the CPU chip [column 3, lines 7-10].

Regarding claim 31, Atkinson further discloses that the determination of the transition rate is based on a voltage change in said at least one node and said transition rate is based on said voltage change [CAS* counter increments when the CAS* address changes, column 5, lines 25-56].

Regarding claim 32, Atkinson further discloses using an interrupt timer to employ a time period for determining a transition rate [interrupt timer, column 6, lines 45-60].

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 26, 27 and 33-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Atkinson, US Patent no. 6,233,691.

Regarding claim 26 and 33, Atkinson, as described above, discloses a power selection system for use with a reconfigurable circuit. Atkinson does not specifically disclose using a sample and hold circuit and two comparators for determining whether a count value is within a

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range. However, sample and hold circuit and comparators systems are notoriously well known in the art to be used to determining whether a count value is within a range. It would have been obvious to one of ordinary skill in the art to include the well known sample and hold circuit and comparators system in order to determine whether the CAS* value is in a certain range.

Regarding claim 27, Atkinson, as described above, discloses a power selection system for use with a reconfigurable circuit. Atkinson does not disclose that the reconfigurable circuit that comprises a PRBS generator. However, reconfigurable PRBS generators are well known in the art. It would have been obvious to one of ordinary skill in the art to apply the power selecting method taught by Atkinson to well known reconfigurable PRBS generators in order to reduce their power consumption.

Regarding claims 34-40, Atkinson, as described above, discloses a power selection system for use with a reconfigurable circuit. Atkinson does not disclose that the reconfigurable circuit comprises a monitored circuit with a delay element and a multiplier, such as a PRBS generator or a digital filter. However, reconfigurable PRBS generators and digital filters are well known in the art. It would have been obvious to one of ordinary skill in the art to apply the power selecting method taught by Atkinson to well known reconfigurable PRBS generators and digital filters in order to reduce their power consumption.

Conclusion

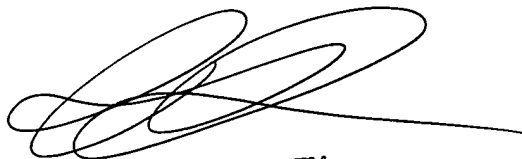
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul B. Yanchus whose telephone number is (571) 272-3678. The examiner can normally be reached on Mon-Thurs 8:00-6:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynne H. Browne can be reached on (571) 272-3670. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Paul Yanchus
April 28, 2005



REHANA PERVEEN
PRIMARY EXAMINER